

**AMENDMENTS TO THE CLAIMS**

1-12. (cancelled)

13. (Currently Amended) A process for the preparation of ~~an optionally protected~~  $\beta$ -L-2'-deoxythymidine comprising the steps of:

- (a) reacting a L-2-deoxyribose with an alcohol to form a L-1-O-alkyl-2-deoxyribose;
- (b) ~~optionally~~ protecting the remaining free hydroxyls of the L-1-O-alkyl-2-deoxyribose to form ~~an optionally~~ protected L-1-O-alkyl-2-deoxyribose;
- (c) reacting the ~~optionally~~ protected L-1-O-alkyl-2-deoxyribose with an anhydrous acid halide to form ~~an optionally~~ protected L-1-halo-2-deoxyribose, wherein the anhydrous acid halide is produced *in situ* by the reaction of an acyl halide with a sub-equivalent amount of a second alcohol;
- (d) coupling the ~~optionally~~ protected L-1-halo-2-deoxyribose with silylated thymine in chloroform to form ~~an optionally~~ protected  $\beta$ -L-2'-deoxythymidine and a protected  $\alpha$ -L-2'-deoxythymidine, wherein the ratio of the silylated thymine to the protected L-1-halo-2-deoxyribose is at least 1:1 and wherein the ratio of the protected  $\beta$ -L-2'-deoxythymidine to the protected  $\alpha$ -L-2'-deoxythymidine is greater than about 10:1; and then
- (e) deprotecting the ~~optionally~~ protected  $\beta$ -L-2'-deoxythymidine, ~~if necessary~~, to obtain a  $\beta$ -L-2'-deoxythymidine.

14. (Canceled).

15. (Original) The process of claim 13, wherein the silylated thymine is added in excess.

16. (Original) The process of claim 15, wherein the silylated thymine is added in a 2 molar excess.

17. (Currently Amended) A process for the preparation of ~~an optionally protected~~  $\beta$ -L-2'-deoxyuridine comprising the steps of:

- (a) reacting a L-2-deoxyribose with an alcohol to form a L-1-O-alkyl-2-deoxyribose;
- (b) ~~optionally~~ protecting the remaining free hydroxyls of the L-1-O-alkyl-2-deoxyribose to form an ~~optionally~~ protected L-1-O-alkyl-2-deoxyribose;
- (c) reacting the ~~optionally~~ protected L-1-O-alkyl-2-deoxyribose with an anhydrous acid halide to form an ~~optionally~~ protected L-1-halo-2-deoxyribose, wherein the anhydrous acid halide is produced *in situ* by the reaction of an acyl halide with a sub-equivalent amount of a second alcohol;
- (d) coupling the ~~optionally~~ protected L-1-halo-2-deoxyribose with silylated uracil in chloroform to form an ~~optionally~~ protected  $\beta$ -L-2'-deoxyuridine and a protected  $\alpha$ -L-2'- deoxyuridine, wherein the ratio of the silylated uracil to the protected L-1-halo-2-deoxyribose is at least 1:1 and wherein the ratio of the protected  $\beta$ -L-2'-deoxyuridine to the protected  $\alpha$ -L-2'-deoxyuridine is greater than about 10:1; and then
- (e) deprotecting the ~~optionally~~ protected  $\beta$ -L-2'-deoxyuridine, if necessary, to obtain a  $\beta$ -L-2'-deoxyuridine.

18. (Cancelled).

19. (Original) The process of claim 17, wherein the silylated uracil is added in excess.

20. (Original) The process of claim 19, wherein the silylated uracil is added in a 2 molar excess.

21-68. (cancelled)

69. (Previously Presented) The process of claim 13 or 17, wherein the alcohol is ethanol.

70. (Previously Presented) The process of claim 13 or 17, wherein the alcohol is methanol.

71. (Previously Presented) The process of claim 13 or 17, wherein the L-2-deoxyribose is reacted with an alcohol in the presence of an acid.

72. (Previously Presented) The process of claim 71, wherein the acid is an organic sulfonic acid.

73. (Previously Presented) The process of claim 72, wherein the acid is toluene sulfonic acid.

74. (Previously Presented) The process of claim 72, wherein the acid is methyl sulfonic acid.

75. (Previously Presented) The process of claim 71, wherein the acid is a carboxylic acid.

76. (Previously Presented) The process of claim 13 or 17, wherein an acid scavenger is used to quench the acid after formation of the L-1-O-alkyl-2-deoxyribose is complete.

77. (Previously Presented) The process of claim 76, wherein the acid scavenger is selected from the group consisting of triethylamine, pyridine and dimethylaminopyridine.

78. (Currently Amended) The process of claim 13 or 17, wherein the remaining ~~free~~ free hydroxyls are protected with an acyl group.

79. (Previously Presented) The process of claim 78, wherein the acyl group is toluoyl.

80. (Previously Presented) The process of claim 13 or 17, wherein the acid halide is an acid chloride.

81. (Previously Presented) The process of claim 80, wherein the acid chloride is acetyl chloride.

82. (Canceled).

83. (Previously Presented) The process of claim 13 or 17, wherein the second alcohol is methanol.

84. (Currently Amended) The process of claim 13 or 17, wherein the optionally protected L-1-halo-2-deoxyribose crystallizes as it forms.

85. (Currently Amended) The process of claim 13 ~~or 17~~, wherein the protected  $\beta$ -L-2'-deoxythymidine is deprotected by reaction with sodium methoxide in methanol.

86. (New) The process of claim 17, wherein the protected  $\beta$ -L-2'-deoxyuridine is deprotected by reaction with sodium methoxide in methanol.